to vital loads, or sources of power to final emergency loads.

(a) *Large.* A large battery installation is one connected to a battery charger having an output of more than 2 kilowatts (kw), computed from the highest possible charging current and the rated voltage of the battery installation.

(b) *Small.* A small battery installation is one connected to a battery charger having an output of 2 kw or less, computed as above.

[CGD 85–080, 61 FR 997, Jan. 10, 1996, as amended by CGD 97–057, 62 FR 51050, Sept. 30, 1997]

§ 183.354 Battery installations.

(a) *Large batteries.* Each large battery installation must be located in a locker, room or enclosed box solely dedicated to the storage of batteries. Ventilation must be provided in accordance with §111.15–10 in subchapter J of this chapter. Electrical equipment located within the battery enclosure must be approved by an independent laboratory for Class I, Division 1, Group B hazardous locations and meet §111.105 in subchapter J of this chapter.

(b) *Small batteries.* Each small battery installation must be located in a well ventilated space and protected from falling objects. A small battery installation must not be in a closet, storeroom or similar space.

§ 183.360 Semiconductor rectifier systems.

(a) Each semiconductor rectifier system must have an adequate heat removal system that prevents overheating.

(b) Where a semiconductor rectifier system is used in a propulsion system or in other vital systems it must:

(1) Have a current limiting circuit;

(2) Have external overcurrent protection; and

(3) Meet Sections 35.84.2 and 35.84.4 of the American Bureau of Shipping (ABS), ''Rules for Building and Classing Steel Vessels,'' or other standard specified by the Commandant.

§ 183.370 General grounding requirements.

(a) A vessel's hull must not carry current as a conductor except for the following systems:

(1) Impressed current cathodic protection systems; or

(2) Battery systems for engine starting.

(b) Receptacle outlets and attachment plugs for portable lamps, tools, and similar apparatus operating at 100 volts or more, must have a grounding pole and a grounding conductor in the portable cord.

(c) Each nonmetallic mast and top mast must have a lightning ground conductor.

§ 183.372 Equipment and conductor grounding.

(a) All metallic enclosures and frames of electrical equipment must be permanently grounded to the hull on a metallic vessel. On a nonmetallic vessel, the enclosures and frames of electrical equipment must be bonded together to a common ground by a normally non-current carrying conductor. Metallic cases of instruments and secondary windings of instrument transformers must be grounded.

(b) On a nonmetallic vessel, where a ground plate is provided for radio equipment, it must be connected to the common ground.

(c) Equipment grounding conductors must be sized in accordance with Section 250–95 of the NEC (NFPA 70), or other standard specified by the Commandant.

(d) Each insulated grounding conductor of a cable must be identified by one of the following means:

(1) A green braid or green insulation;

(2) Stripping the insulation from the entire exposed length of the grounding conductor; or

(3) Marking the exposed insulation of the grounding conductor with green tape or green adhesive labels.

(e) Cable armor must not be used to ground electrical equipment or systems.

§ 183.376 Grounded distribution systems (neutral grounded).

(a) If a grounded distribution system is provided, there must be only one connection to ground, regardless of the number of power sources. This ground connection must be at the switchboard or at the common ground plate, which must be accessible.